IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Stephen C. Ekker et al.
Serial No. : 09/918,242
Filed : July 30, 2001
Title : INHIBITION OF GENE EXPRESSION USING POLYNUCLEOTIDE ANALOGUES

Art Unit : 1635
Examiner : J. Angell

Commissioner for Patents
Washington, D.C. 20231

RESPONSE TO RESTRICTION REQUIREMENT

Responsive to the Restriction Requirement mailed September 30, 2002, Applicants elect the invention of Group II, claims 21-23 and 59-64. Applicants respectfully traverse this Restriction.

The Examiner stated that the inventions of Groups I and II are related as process of making and product made. The Examiner further stated that the product as claimed can be made by another and materially different process, and used, as an example, a process of mutating the embryo genome such that expression of a nucleic acid is reduced. Applicants respectfully disagree with the Examiner's statements. Mutagenesis would not produce the product as claimed in the claims assigned to Group I, since those claims (*e.g.*, claim 1) recite a "teleost embryo comprising a polynucleotide analogue." A teleost embryo containing a "polynucleotide analogue" cannot be produced using mutagenesis. Therefore, Applicants submit that the product recited in the claims assigned to Group I cannot be made by another and materially different process from that recited in the claims assigned to Group II. Should the claims of Group I be rejoined with the elected claims of Group II, Applicants elect the species of vasculature tissue. Accordingly, Applicants submit that the claims of Group I (claims 1-20 and 40-53) should be rejoined with the claims of Group II (claims 21-23 and 59-64).

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In addition, the Examiner stated that the invention of Group I is related to the invention of Group IV as a product and process of use. The Examiner stated that the claimed process for using the product can be practiced with another materially different product. As an example of a materially different product, the Examiner used an embryo having reduced expression of a nucleic acid due to a modified polynucleotide or due to integration of a nucleic acid to generate a knock-out embryo. Applicants respectfully disagree with the Examiner's statements. Claim 32 recites a "method for determining a phenotype associated with a selected nucleic acid in a teleost embryo or egg giving rise to said embryo", and requires the step of "contacting said teleost embryo or egg...with a morpholino-modified polynucleotide analogue that targets said selected nucleic acid...." Therefore, claims 32-35 assigned to Group IV require that the product be the same as that claimed in the claims assigned to Group I. In addition, claim 36 of Group IV recites a "method for determining if a phenotype mediated by a polynucleotide analogue in a teleost organism is sequence specific", and requires the step of "contacting a first teleost embryo or teleost egg with said polynucleotide analogue...." As with claims 32-35, claim 36 requires that the product be the same as that claimed in the claims assigned to Group I. Therefore, the Examiner is incorrect in stating that the processes recited in the claims of Group IV can be used with another materially different product. On the contrary, the claims of Group IV recite steps that generate a particular product and are therefore limited to that product. Thus, Applicants submit that the process recited in the claims assigned to Group IV cannot use a materially different product from that recited in the claims assigned to Group I. Accordingly, Applicants submit that the claims of Group I (claims 1-20 and 40-53) should be rejoined with the claims of Group IV (claims 32-36).

The Examiner stated that the inventions of Groups II and IV are unrelated, because the different inventions are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects. Applicants respectfully disagree with the Examiner's statements. Applicants submit that the claims of Groups II and IV are, in fact, related. The claims of Group II are directed toward a "method for producing a teleost embryo

embryo..... comprising...detecting an altered phenotype in said teleost embryo or egg....wherein said altered phenotype is associated with reduced expression...of said selected nucleic acid." Therefore, Applicants submit that the claims of Group II and the claims of Group IV are related because, for example, the two methods are capable of being used together. By way of example, the method of claim 21 could further comprise the step of detecting an altered phenotype (claim 32). Accordingly, Applicants submit that the claims of Group II (claims 21-23 and 59-64) should be rejoined with the claims of Group IV (claims 32-36).

In addition, Applicants note that claims 56-58 are not assigned to a Group. Claims 56-58 depend from claim 55, and therefore should be assigned to Group VII. Applicants respectfully request clarification in the event a future Divisional application is filed that corresponds to the claims of Group VII.

Enclosed is a $200 check for a Two-Month Petition for Extension of Time fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: December 4, 2002

M. Angela Parsons

M. Angela Parsons, Ph.D.
Reg. No. 44,282

Fish & Richardson P.C., P.A.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696